



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,286	09/29/2003	Biing-Hwang Juang	502076-A-01-US (Juang)	3118
47702 7590 09/27/2007 RYAN, MASON & LEWIS, LLP 1300 POST ROAD SUITE 205 FAIRFIELD, CT 06824			EXAMINER LENNOX, NATALIE	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 09/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/674,286

Applicant(s)

JUANG ET AL.

Examiner

Natalie Lennox

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action has been issued in response to the arguments filed on July 18, 2007. Claims 1-20 are pending. No amendments were filed.

Response to Arguments

1. Applicant's arguments, see page 2, line 14 to page 3, line 15, filed July 18, 2007, with respect to claims 16-20 have been fully considered and are persuasive. The rejection of claims 16-20 has been withdrawn.

2. Applicant's arguments filed July 18, 2007 have been fully considered but they are not persuasive. Regarding claims 1, 9, and 16, applicant argues that "Ramaswamy does not disclose or suggest processing spoken answers to one or more questions using an automatic speech recognition technique." However, examiner respectfully disagrees. Ramaswamy's Fig. 1 illustrates the use of an acoustic & biometric verifier 112, which is described on Col. 4, lines 51-64. Ramaswamy specifically recites that the "verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as a password, mother's maiden name, social security number, etc." Furthermore, Ramaswamy, in the description of Fig. 1, recites "the input from the user 110 is expected to be a spoken utterance, [w]hen spoken input is used, a conversational system 114 first converts the spoken utterance into text using a speech recognition engine 113." Applicant also argued that Ramaswamy taught a conversational system

Art Unit: 2626

for receiving inputs from a user and transforming the inputs into formal commands (Col. 1, lines 45-48), however Ramaswamy also discloses that "the system may further include an acoustic and biometric verifier for determining acoustic and biometric information from the user and determining a second probability that the user is authorized to interact with the system based on the user's acoustic or biometric information..." (Col. 2, lines 9-14).

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 5, 9, 13, 16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramaswamy et al. (US Patent 6,490,560).

As per claim 1, Ramaswamy et al. teach a method for authenticating a user, - comprising:

obtaining an asserted identity of said user (Col. 4, lines 55-59, The verification process may include matching an acoustic signature of the person claiming to be a given user to the known acoustic signature of the claimed user);

presenting one or more questions to said user that said user has previously answered (Col. 4, lines 59-63, The verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as password, mother's maiden name, social security number,

Art Unit: 2626

etc., it is inherent that these questions had been previously answered for the system to be able to compare results); and

processing spoken answers to said one or more questions using an automatic speech recognition technique (Col. 4, lines 15-20, The input from the user is expected to be a spoken utterance [...] When a spoken input is used, a conversational system first converts the spoken utterance into text using a speech recognition engine).

As per claim 5, Ramaswamy et al. teach the method according to claim 1, wherein said processing step further comprises the step of converting said spoken answers to a textual form and comparing said textual form to answers obtained during an enrollment phase (Col. 4, lines 18-20, When spoken input is used, a conversational system first converts the spoken utterance into text using a speech recognition engine, also in Col. 4, lines 55-63, The verification process may include matching an acoustic signature of the person claiming to be a given user [...] The verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as password, mother's maiden name, social security number, etc., just as stated in lines 55 to 59, part of the verification process includes matching or comparison, and as stated before it is inherent that the answers for the specific questions had been already answered in order for the system to be capable of comparing results).

As per claim 9, Ramaswamy et al. teach an apparatus for authenticating a user, comprising:

a memory (Col. 3, lines 52-57, these elements are implemented in software on one or more appropriately programmed general purpose digital computers having a processor and memory and input-output interfaces); and

at least one processor, coupled to the memory (Col. 3, lines 52-57, these elements are implemented in software on one or more appropriately programmed general purpose digital computers having a processor and memory and input-output interfaces), operative to:

obtain an asserted identity of said user (Col. 4, lines 55-59, The verification process may include matching an acoustic signature of the person claiming to be a given user to the known acoustic signature of the claimed user);;

present one or more questions to said user that said user has previously answered (Col. 4, lines 59-63, The verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as password, mother's maiden name, social security number, etc., it is inherent that these questions had been previously answered for the system to be able to compare results); and

process spoken answers to said one or more questions using an automatic speech recognition technique (Col. 4, lines 15-20, The input from the user is expected to be a spoken utterance [...] When a spoken input is used, a conversational system first converts the spoken utterance into text using a speech recognition engine).

As per claim 13, Ramaswamy et al. teach the apparatus according to claim 9, wherein said processor is further configured to convert said spoken answers to a textual

Art Unit: 2626

form and comparing said textual form to answers obtained during an enrollment phase (Col. 4, lines 18-20, When spoken input is used, a conversational system first converts the spoken utterance into text using a speech recognition engine, also in Col. 4, lines 55-63, The verification process may include matching an acoustic signature of the person claiming to be a given user [...] The verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as password, mother's maiden name, social security number, etc., just as stated in lines 55 to 59, part of the verification process includes matching or comparison, and as stated before it is inherent that the answers for the specific questions had been already answered in order for the system to be capable of comparing results).

As per claim 16, Ramaswamy et al. teach an article of manufacture for authenticating a user, comprising a machine readable medium containing one or more programs which when executed implement the steps of (Col. 3, lines 52-54):

obtaining an asserted identity of said user (Col. 4, lines 55-59, The verification process may include matching an acoustic signature of the person claiming to be a given user to the known acoustic signature of the claimed user.);

presenting one or more questions to said user that said user has previously answered (Col. 4, lines 59-63, The verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as password, mother's maiden name, social security number,

etc., it is inherent that these questions had been previously answered for the system to be able to compare results); and

processing spoken answers to said one or more questions using an automatic speech recognition technique (Col. 4, lines 15-20, The input from the user is expected to be a spoken utterance [...] When a spoken input is used, a conversational system first converts the spoken utterance into text using a speech recognition engine).

As per claim 18, Ramaswamy et al. teach the article of manufacture according to claim 16, wherein said processing step further comprises the step of converting said spoken answers to a textual form and comparing said textual form to answers obtained during an enrollment phase (Col. 4, lines 18-20, When spoken input is used, a conversational system first converts the spoken utterance into text using a speech recognition engine, also in Col. 4, lines 55-63, The verification process may include matching an acoustic signature of the person claiming to be a given user [...] The verification process may also include biometric verification whereby the person claiming to be the user is prompted for answers to specific questions, such as password, mother's maiden name, social security number, etc., just as stated in lines 55 to 59, part of the verification process includes matching or comparison, and as stated before it is inherent that the answers for the specific questions had been already answered in order for the system to be capable of comparing results).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 2, 3, 6, 10, 11, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramaswamy et al. (US Patent 6,490,560) as applied to claims 1, 9, and 16 above, and further in view of Honarvar et al. (US 2003/0154406).

As per claim 2, Ramaswamy et al. teach the method and apparatus according to claim 1, but they don't specifically mention said processing step being performed until a predefined security threshold is satisfied. However, Honarvar et al. teach that in order to develop a confidence score, for example, for an identity Verification sub-process, a vendor determines the points for each authentication question to derive predictive confidence scores. A predictive confidence score is a threshold that indicates whether the vendor's organization feels the user has been authenticated sufficiently enough to proceed with a business transaction (Paragraph [0233]).

It would have been obvious to one having ordinary skill in the art to have combined the feature of a security threshold as taught by Honarvar et al. with Ramaswamy et al.'s method because Honarvar et al. provides a method for user authentication where the authentication result is determined by calculating a confidence score based upon the parameters assigning points to each generated authentication question (Paragraph [0041]).

As per claim 3, Ramaswamy et al., as modified above, teach the method according to claim 2, wherein said predefined security threshold is based on a sum of

security weights of correctly answered questions (Honarvar et al.'s paragraphs [0233] and [0234], where the confidence score is a threshold that indicates whether the vendor's organization feels the user has been authenticated sufficiently enough to proceed with a business transaction. Questions weighing involves the assigning of point values to all of the questions that comprise an authentication sub-process of a user authentication process. The authentication engine generates a confidence score upon completion of the identity verification sub-process [and] determines which questions are answered correctly and totals the associated points for each correct response).

As per claims 6 and 19, Ramaswamy et al. teach the method and article of manufacture according to claims 1 and 16, but don't specifically mention said processing step further comprising the step of obtaining a confidence score for a recognized version of said spoken answer. However, Honarvar et al. teach a confidence score, for example, for an identity verification sub-process, a vendor determines the points for each authentication question to derive predictive confidence scores, and that the questions weighing involves the assigning of point values to all of the questions that comprise an authentication sub-process of a user authentication process. The authentication engine determines which questions are answered correctly and totals the associated points for each correct response (Paragraphs [0233] and [0234]).

It would have been obvious to one having ordinary skill in the art to have combined the feature of a security threshold as taught by Honarvar et al. with Ramaswamy et al.'s method and article of manufacture because Honarvar et al. provides a method and article of manufacture for user authentication where the

Art Unit: 2626

authentication result is determined by calculating a confidence score based upon the parameters assigning points to each generated authentication question (Paragraph [0041]).

As per claim 10, Ramaswamy et al. teach the apparatus according to claim 9, but they don't specifically mention said processor being further configured to process said spoken answers until a predefined security threshold is satisfied. However, Honarvar et al. teach that in order to develop a confidence score, for example, for an identity verification sub-process, a vendor determines the points for each authentication question to derive predictive confidence scores. A predictive confidence score is a threshold that indicates whether the vendor's organization feels the user has been authenticated sufficiently enough to proceed with a business transaction (Paragraph [0233]).

It would have been obvious to one having ordinary skill in the art to have combined the feature of a security threshold as taught by Honarvar et al. with Ramaswamy et al.'s apparatus because Honarvar et al. provides a method and system for user authentication where the authentication result is determined by calculating a confidence score based upon the parameters assigning points to each generated authentication question (Paragraph [0041]).

As per claim 11, Ramaswamy et al., as modified above, teach the apparatus according to claim 10, wherein said predefined security threshold is based on a sum of surety weights of correctly answered questions (Honarvar et al.'s paragraphs [0233] and [0234], where the confidence score is a threshold that indicates whether the vendor's

organization feels the user has been authenticated sufficiently enough to proceed with a business transaction. Questions weighing involves the assigning of point values to all of the questions that comprise an authentication sub-process of a user authentication process. The authentication engine generates a confidence score upon completion of the identity verification sub-process [and] determines which questions are answered correctly and totals the associated points for each correct response).

As per claim 14, Ramaswamy et al. teach the method according to claim 9, but they don't specifically mention said processor being further configured to obtain a confidence score for a recognized version of said spoken answer. However, Honarvar et al. teach that in order to develop a confidence score, for example, for an identity verification sub-process, a vendor determines the points for each authentication question to derive predictive confidence scores, and that the questions weighing involves the assigning of point values to all of the questions that comprise an authentication sub-process of a user authentication process. The authentication engine determines which questions are answered correctly and totals the associated points for each correct response (Paragraphs [0233] and [0234]).

It would have been obvious to one having ordinary skill in the art to have combined the feature of a security threshold as taught by Honarvar et al. with Ramaswamy et al.'s apparatus because Honarvar et al. provides an apparatus for user authentication where the authentication result is determined by calculating a confidence score based upon the parameters assigning points to each generated authentication question (Paragraph [0041]).

7. Claims 4, 7, 12, 15, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramaswamy et al. (US Patent 6,490,560) as applied to claims 1,9, and 16 above, and further in view of August (US 2002/0094067).

As per claims 4, 12, and 17, Ramaswamy et al. teach the method, apparatus, and article of manufacture according to claims 1,9, and 16, but don't specifically mention further comprising the step of processing said answer using an utterance verification technique. However, August teaches a speech processing unit that includes an Utterance Verification/Verbal Information Verification (VIV) application. The VIV application enables the network to interpret spoken utterances of a subscriber (Paragraph [0048]).

It would have been obvious to a person having ordinary skill in the art to have combined August's feature of an utterance verification application for Ramaswamy et al.'s method, apparatus, and article of manufacture because August provides an automated speech recognition method and system such as Verbal Information Verification or the like that has the flexibility to utilize a more extensive grammar than in a system recognizing only globally-available commands without having to train the system to recognize the particular subscriber's pronunciations of words (Paragraph [0012]).

As per claims 7, 15, and 20, Ramaswamy et al. teach the method, apparatus, and article of manufacture according to claims 1,9, and 16. Ramaswamy et al. also teach a verification process that may include biometric verification whereby the person claiming

Art Unit: 2626

to be the user is prompted for answers to specific questions, such as a password, mother's maiden name, social security number, etc. (Col. 4, lines 59-63), where it is inherent that the questions had to be already answered by the user in order for the verification process to be able to compare them. Ramaswamy et al. don't specifically mention the processing step further comprising or processor further configured to employ word spotting techniques. However, August teaches a signal processing unit that processes an acoustic signal using word spotting and utterance verification with Verbal Information Verification (VIV) to recognize the recited words (Paragraph [0065]).

It would have been obvious to a person having ordinary skill in the art to have combined August's feature of a word spotting technique for Ramaswamy et al.'s method, apparatus, and article of manufacture because August provides an automated speech recognition method and system such as Verbal Information Verification or the like that has the flexibility to utilize a more extensive grammar than in a system recognizing only globally-available commands without having to train the system to recognize the particular subscriber's pronunciations of Words (Paragraph [0012]).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramaswamy et al. (US Patent 6, 490,560) as applied to claim 1 above, and further in view of Arnold (US 2002/0147914).

As per claim 8, Ramaswamy et al. teach the method according to claim 1, but don't specifically mention said authentication being performed in connection with the resetting of a password of said user. However, Arnold teaches that once the user has

Art Unit: 2626

been authenticated, the automated password reset program resets the password and delivers a new password to the user in a way that further enhances the overall security of the system (Paragraph [0010]).

It would have been obvious to one having ordinary skill in the art to have combined the feature-of a resetting of a password as taught by Arnold for Ramaswamy et al.'s method because Arnold provides a method of providing a password reset without the use of human intervention, a way to provide a new password without introducing a delay between resetting the password and the user actually receiving the new password, and a technique to deliver the new password to the user in a way that further enhances the security of the system (Paragraph [0008]).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2626

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie Lennox whose telephone number is (571) 270-1649. The examiner can normally be reached on Monday to Friday 9:30 am - 7 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NL

09/24/2007


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER